NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T
(Pursuant to NAC 445A.236)

NPDES PERMIT RENEWAL NV0020893

October 2003

PERMITTEE NAME: Vista Canyon Group, LLC
A corporate entity comprised of the following companies: Santa Fe Pipeline, Inc.; Unocal Corporation; Southern Pacific Transportation Company; Shell Oil Company; Berry-Hinkley Terminal, Inc.; Texaco Refining and Marketing, Inc.; Time Oil Company; and Chevron US, Inc.

MAILING ADDRESS: Post Office Box 281304
Lakewood, Colorado 80228-8304

PERMIT NUMBER: NV0020893 - Renewal

DISCHARGE LOCATION: 255 South Stanford Way
Sparks, Washoe County, Nevada 89431

Latitude: 39°22'00" North
Longitude: 119°44'20" West

FLOW: 1.6 million gallons per day 30-Day Average
2.0 million gallons per day Daily Maximum

Outfall 001: Treated groundwater discharge to the Truckee River
Outfall 002: Treated groundwater for phytoremediation irrigation, discharge to groundwater

GENERAL:
Permit NV0020893 authorizes the discharge of treated groundwater to the Truckee River and to phytoremediation plots for irrigation. The initial permit was issued in October 1998 (1998 Permit), when subsurface remediation activities associated with Helm's Pit in Sparks, Nevada were initiated. Remedial efforts currently focus on groundwater restoration at select locations near the Sparks Marina, the Sparks tank farm, and various intermediate locations on both the north and south side of Interstate Highway 80, where residual concentrations of petroleum hydrocarbons have been identified in groundwater.

Petroleum impacted water is treated using an oil/water separator followed by biological treatment through two (2) aerobic fluidized bed reactors (FBR/s) with granulated activated carbon for removal of organic constituents (Plant 1). A high pressure oxidation (HiPOx) unit is sited adjacent to Plant 1 providing wellhead groundwater treatment for removal of methyl tertiary butyl ether (MTBE) at a cumulative rate of approximately 32 gallons per minute (gpm). The combined flow from Plant 1, the HiPOx unit, and ancillary hydraulic control wells is directed through a secondary FBR containing sand media used for nitrate removal (Plant 2). Total flow through the combined system is approximately 1.6 million gallons per day (MGD).

Waste load allocations for total nitrogen, total phosphorus, and total dissolved solids are assigned to this discharge and have been in effect since permit issuance in 1998. Conditions for the application and provisional institution of a mixing zone in the Truckee River were also incorporated into the 1998 Permit.

The integrated use of remedial treatment technologies on this project, e.g. the FBR and HiPOx systems, are predicated on the existing permit limitations as relevant design criteria. Consequently, while historic and

contemporary data continues to demonstrate an absence of adverse impact to the Truckee River as a result of the discharge, those effluent discharge limitations that have been reasonably and appropriately used as treatment system design parameters shall remain unaltered. However, certain other limitations that were specified in the 1998 Permit have been considered for change or elimination.

RECEIVING WATER CHARACTERISTICS:

Treated effluent discharges from Plant 2 to the People's Ditch, where it flows approximately one (1) mile to the confluence with the Truckee River. Water quality standards for the Truckee River at the Lockwood Bridge, Nevada Administrative Code (NAC) 445A.187, apply to the affected stream segment. Beneficial uses listed for this segment include: aquatic life, water contact recreation, wildlife propagation, irrigation, stock watering, municipal or domestic supply, industrial supply, and non-contact recreation. Discharge limitations are also subject to limitation in accordance with NAC 445A.110 *"Toxic Material" defined* and on NAC 445A.144 *Standards for toxic materials applicable to designated waters*.

Outfall 002 discharges to phytoremediation plots to irrigate specific varieties of trees that are cultivated to uptake subsurface contaminants. This discharge is regulated as a discharge to groundwater. Standards listed for the discharge to the Truckee River are adequately protective of groundwater quality and therefore, the effluent limitations assigned for Outfall 001 are sufficient to regulate the discharge to groundwater.

DISCHARGE CHARACTERISTICS:

The discharge is groundwater that is pumped and treated to remove fuel and solvent products targeted under the "Sparks Solvent (Tank Farm)/Fuel Site Remediation" project. Contaminant constituents include common fuel hydrocarbons such as benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertbutyl ether (MTBE), as well as several halogenated solvents, primarily trichloroethylene (TCE) and tetrachloroethylene (PCE). The groundwater treatment system is designed to achieve the level of treatment necessary to satisfy the effluent limitations established in the 1998 Permit.

In the past five (5) years of system operation and discharge, effluent characteristics have remained in substantial compliance, with only MTBE and PCE exhibiting limited and sporadic episodes of persistence in the discharge. The instances where constituent concentrations were identified to be in excess of effluent limitations are generally explained by 'system start ups' when intake or operational parameters were being tested and were fluctuating.

MTBE exceeded discharge limitations during the initial operation of the system in December 98 (approximately 50 to 69 micrograms per liter [μg/L, parts per billion]) and February through May 1999 (approximately 42 to 54 μg/L), until the HiPOx unit was fully integrated into the treatment process. Since May 1999, samples of the discharge to the Truckee River have confirmed concentrations below the 40μg/L effluent limitation.

PCE concentrations exceeded the discharge limitation of 5 μg/L by less than 1 μg/L (5.6 to 5.7 μg/L) for a brief period between July and September 2002 when new wells were brought on-line. System adjustments in 2002 have optimized the treatment efficiency of PCE to yield concentrations below effluent limitations. Whole effluent toxicity tests performed during this same time period yielded 100% survival of test species. Because the system is designed to achieve sufficient treatment at the maximum flow rate of 2.0 million gallons per day (mgd), future upset is not anticipated under existing and projected operational conditions.

Nitrogen compounds inherent in local groundwater also require treatment prior to discharge in order to comply with the Total Maximum Daily Load (TMDL) assigned to the Truckee River and the apportioned Individual Waste Load Allocation (IWLA) for nitrogen allocated for the 1998 Permit. The Truckee River also has TMDLs for phosphorus and total dissolved solids, and IWLAs for these constituents were also derived and allocated for the 1998 Permit.

PROPOSED LIMITATIONS:

Although the discharge has remained relatively constant since the initial permit issue in 1998, there has been a substantial amount of data collected to verify the characteristics of the discharge, and using Whole Effluent

Toxicity testing, the net effect on the Truckee River over time. Effluent limitations derived in 1998 have been sufficient to avert adverse effect on the Truckee River, and with the exception of only a few parameters, remain generally unchanged in the proposed renewal.

Individual Waste Load Allocations (IWLA) that were derived and assigned to the Sparks Solvent/Fuel Site Remediation project in 1998 because of contributing mass loads of nitrogen, phosphorus, and total dissolved solids remain in place. Alternate compliance conditions based on the cumulative WLA (∑WLA) between the Sparks Solvent/Fuel Site Remediation, the Sparks Marina, and the Truckee Meadows Water Reclamation Facility (TMWRF) also remain unchanged to preserve their ability share the net waste load allocation.

The ∑WLA compliance criteria simply allows compliance to be demonstrated as a collective function of the mass discharged by all three dischargers in any particular monitoring period. As long as the ∑WLA is not exceeded by the sum of the discharges, the individual permit effluent limitation is satisfied.

The concentration-based effluent limitation for total nitrogen is, however, superseded by compliance criteria based on the IWLA because Plant 2 is fully operational and denitrifies treated groundwater prior to discharge. Consequently, the use of a mixing zone for nitrogen species, which had been included in the 1998 Permit, is negated, and references to a mixing zone and any associated monitoring requirements that had been instituted have been omitted.

Treated groundwater is predominantly discharged from Plant 2 to the People's Ditch, which leads to the Truckee River; however, a slip stream of this discharge is periodically used to irrigate phytoremediation plots located adjacent to Plant 2. All treatment is complete after the effluent pump from the aeration basin of Plant 2. Therefore, water used for irrigation is of the same quality and has been treated exactly the same as that discharged to the People's Ditch and an effluent sample collected at People's Ditch is equivalent to that collected for the discharge to the irrigation plots. Because these samples are redundant, the renewed permit regards compliance samples collected at the People's Ditch from the effluent discharge of Plant 2 ("prior to discharge to People's Ditch" in the1998 Permit) as indicative of the quality of water applied for irrigation purposes, and consequently the EFF2 sample location is omitted.

In addition, the flow rate into the treatment system (Plant 2) is not altered by any function of treatment and is the same flow rate as the effluent from Plant 2. Consequently, the INF monitoring location, which was only monitored for flow rate, is also omitted from the proposed renewal.

Effluent Discharge Limitations
During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge from:

Outfall 001:	From the Sparks Rail Yard/Terminal Remediation Facility to the People's Ditch at the east terminus of Nugget Avenue, converging with the Truckee River at a location immediately northwest of the Truckee Meadows Wastewater Reclamation Facility; and
Outfall 002:	Discharge to the phytoremediation plots.

Effluent samples and/or measurements taken in compliance with the monitoring requirements specified below shall be collected at:

EFF:	At the discharge of Plant 2, prior to conveyance to the People's Ditch and/or the phytoremediation plot(s).

The discharge of treated groundwater from Outfall 001 and Outfall 002 shall be limited and monitored as follows:

INDUSTRIAL EFFLUENT DISCHARGE LIMITATIONS

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Monitoring Location	Measurement Frequency	Sample Type
Discharge Flow (MGD)	1.6	2.0	EFF	Continuous	Flow Meter
TMWRF Flow (MGD)	Report Only	-----	-----	Monthly	Flow Meter
pH (SU)	-----	7.1-8.5	EFF	Monthly	Discrete
Total Phosphorus as P (mg/L)	Monitor & Report		EFF	Monthly	Discrete
Total Phosphorus as P (lbs/day)	Monitor & Report		EFF	Monthly	Calculation
Total Phosphorus as P (lbs/day – 30-Day average)[1]	**Either** 1) 4.75 lbs/day **or** 2) the **ΣWLA** is ≤138.75 lb/day		EFF	Monthly	Calculation
Total Nitrogen as N (mg/L)	Monitor & Report		EFF	Monthly	Discrete
Total Nitrogen as N (lbs/day)[1]	May - October: 16.7 lbs/day 30-day average November – April: Monitor & Report		EFF	Monthly	Calculation
Total Nitrogen as N (lbs/day – annual average)	**Either:** 1) 16.7 lbs/day **or** 2) the **ΣWLA** ≤ 550 lbs/day		EFF	Annually[2]	Calculation based on 30-day averages
Total Dissolved Solids (mg/L)	Monitor & Report		EFF	Monthly	Discrete
Total Dissolved Solids (lbs/day)[1]	Monitor & Report		EFF	Monthly	Calculation
Total Dissolved Solids (lbs/day – annual average)	**Either** 1) 9,730 lbs/day calculated annually **or** 2) the **ΣWLA** is either: a) ≤ 149,288 lbs/day **or** b) ≤ the **ΣWLA** (lbs/day) calculated by TMWRF as an annual average		EFF	Annually[2]	Calculation based on 30-day averages
Nitrate as N (mg/L)	-----	2.0	EFF	Monthly	Discrete
Total Ammonia as N (mg/L)	Derived as a function of each sampling event based on the equation listed below[3]	Derived as a function of each sampling even based on the equation listed below[3]	EFF	Monthly	Discrete
Temperature (°C)	Monitor & Report		EFF	Monthly	Discrete
Dissolved Oxygen (mg/L)	November – March: ≥6.0 April – October: ≥5.0		EFF	Monthly	Discrete
Hardness (mg/L)	Monitor & Report		EFF	Monthly	Discrete
Total Recoverable Lead (μg/L)[4]	$\exp^{1.273\ln(H)-4.705}$	$\exp^{1.273\ln(H)-1.460}$	EFF	Monthly	Discrete
Total Petroleum Hydrocarbons (mg/L)	-----	1	EFF	Monthly	Discrete
Benzene (μg/L)	-----	5	EFF	Monthly	Discrete
Toluene (μg/L)	-----	100	EFF	Monthly	Discrete
Ethylbenzene (μg/L)	-----	100	EFF	Monthly	Discrete
Total Xylene (μg/L)	-----	200	EFF	Monthly	Discrete

Continued

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Monitoring Location	Measurement Frequency	Sample Type
Methyl tertiary butyl ether (μg/L)	-----	40	EFF	Monthly	Discrete
1,2-Dichloroethane (DCA, μg/L)	-----	5	EFF	Monthly	Discrete
Dichloromethane (methylene chloride, μg/L)		Monitor & Report	EFF	Monthly	Discrete
Tetrachloroethylene (PCE, μg/L)	-----	5	EFF	Monthly	Discrete
Trichloroethylene (TCE, μg/L)	-----	5	EFF	Monthly	Discrete
Total Trihalomethanes (μg/L)	-----	100	EFF	Monthly	Discrete
Chloroethylene (Vinyl Chloride, μg/L)	-----	2	EFF	Monthly	Discrete
Whole Effluent Toxicity[5] (Percent Survival)	Monitor & Report[5]		EFF	Semi-Annually[5]	Composite
Volatile Organics[6]	Monitor & Report		EFF	24-48 hours after pumping from new wells	Discrete

1: Reference Part I.A.2 for Waste Load Allocation details.

2: Annual calculations or data to be submitted with the 4th Quarter Discharge Monitoring Report

3: 30-Day Average: $$\left[\frac{0.0577}{1+10^{7.688-pH}}\right]+\left[\frac{2.487}{1+10^{pH-7.688}}\right] x\, MIN\,[2.85, 1.45\, x\, 10^{0.028x(25-T)}]$$

Daily Maximum: $$\left[\frac{0.275}{1+10^{7.204-pH}}\right]+\left[\frac{39.0}{1+10^{pH-7.204}}\right]$$

Where: T = discharge temperature in degrees Celsius (°C)
x = multiplication
MIN = the lesser of the two values separated by the comma

4: Monitoring for this parameter may be reduced as a minor modification or removed based on a consistent demonstration for at least 12 consecutive months that the discharge does not contain lead in excess of aquatic life standards.

5: In accordance with the conditions prescribed in Part I.A.3. Tests to be conducted in April and October to coincide with periods generally accepted as representative of high and low flow in the Truckee River.

6: Aromatic and halogenated volatile organics list included in Attachment A. Analyses shall be conducted using EPA Method 8021/601/602 or equivalent. "New wells" are those wells installed after the issue date of this permit. Any time a new well is incorporated into the groundwater recovery program, an effluent sample must be collected and profiled for volatile organics. Analytical results must be included in the subsequent monitoring report submitted under the conditions of this permit.

MGD: Million gallons per day
SU: Standard units
mg/L: Milligrams per liter
lbs/day: Pounds per day
IWLA: Individual Waste Load Allocation
ΣWLA: Cumulative Waste Load Allocation
°C: Degrees Celsius
μg/L: Micrograms per liter

Eliminated/Consolidated Parameters

Total Suspended Solids
Monitoring requirements for total suspended solids (TSS) are omitted because the discharge is pumped groundwater, which inherently does not contain elevated concentrations of particulate matter. Review of data on file (2002 annual report) indicates consistent TSS concentrations less than 10 mg/L, and considering the source of the discharge and the historical reproducibility of the TSS concentration, continued monitoring for this parameter will not provide useful data relevant to the protection of water quality standards in the Truckee River. Section 402(o)(2) of the Clean Water Act (CWA) provides permissible exceptions to anti-backsliding provisions, in which the culmination of data compiled since 1998 verifying the absence and irrelevance of the discharge on TSS water quality standards for the Truckee River constitutes new information that justifies an exception and the omission of this effluent limitation.

Kjeldahl Nitrogen as N
Un-Ionized Ammonia as N
The Truckee River water quality standards listed under Nevada Administrative Code (NAC) 445A.187 cite limitations for beneficial use standards for Total Ammonia and Total Nitrogen species and do not include standards for kjeldahl nitrogen or un-ionized ammonia. Kjeldahl nitrogen and un-ionized ammonia are not individually listed and limited in the revised permit but are consolidated and regulated appropriately under the Total Nitrogen IWLA assigned for this particular project or the Total Ammonia effluent limitation, respectively. The effluent limitation for Total Ammonia reflects the revised water quality standard referenced in NAC 445A.187 and defined under NAC 445A.118, codified in February 2003.

Sulfate
In the 1998 Permit, this monitoring requirement did not constitute a compliance parameter, but was only a reporting condition and was not assigned an effluent limitation. The initial permit application (1998) specified the sulfate concentration in the discharge well below the beneficial use water quality standard listed in NAC 445A.187 and it has remained relatively constant at comparable concentrations throughout the five (5)-year term of the permit. Continued monitoring of effluent water for this parameter is not expected to provide useful data relevant or necessary to ensure to the protection of water quality standards in the Truckee River. The elimination of this monitoring parameter is not subject to anti-backsliding provisions since effluent limitations were not assigned in the 1998 Permit, and new information (compiled data) justifies the omission.

T*etrachloromethane*
Tetrachloromethane (carbon tetrachloride) was not identified as a constituent of the influent or of the effluent of the groundwater treatment process in the original permit application (1998) and has not been identified in the discharge effluent throughout the duration of the permit since 1998 (reference annual report 2002 graphs). Given the culmination of data collected since 1998 indicating the absence of tetrachlormethane in discharged water, this 'new information' justifies exception to anti-backsliding provisions (CWA Section 402(o)(2)), and consequently the omission of this effluent limitation from the proposed renewal.

Chloroethane
In the 1998 Permit, this monitoring requirement did not constitute a compliance parameter, but was only a reporting condition and was not assigned an effluent limitation. The initial permit application (1998) did not indicate an influent or effluent concentration for this constituent, and chlorethane is not listed under the Standards for Toxic Materials (NAC 445A.144) nor does it have a listed water quality standard for the Truckee River under NAC 445A.187.

Reported concentrations throughout the five (5)-year term of the 1998 Permit (2002 annual report graphs) have consistently confirmed the absence of this compound in discharged effluent. Continued monitoring of effluent water for this parameter will not provide useful data relevant or necessary to ensure to the protection of water quality standards in the Truckee River, and the elimination of this monitoring parameter is not subject to anti-backsliding provisions since effluent limitations were not assigned in the 1998 Permit and new information (compiled data) justifies the omission.

1,1-Dichloroethylene (1,1-DCE)
The initial permit application (1998) did not indicate an influent or effluent concentration for this constituent, and five (5) years worth of data has consistently confirmed the absence of this compound in the discharge. The rationale used to specify an effluent limitation for this compound in the 1998 Permit was that there was an

established drinking water standard for this compound (NAC 445A.144). However, there are many drinking water standards, and while this compound was not and has not been identified in the influent or effluent, inclusion of this analyte in the current list of monitoring parameters is not regarded as practical at this time. Since there is now five (5)-years worth of data confirming that 1,1-DCE is not a constituent of concern (2002 annual report graphs), this new information justifies exception to anti-backsliding provisions (CWA Section 402(o)(2)) and consequently omission of this effluent limitation from the proposed permit renewal.

1,1,1-Trichloroethane (1,1,1-TCA)
1,1,1-TCA was not identified as a constituent of the influent or effluent of the groundwater treatment process in the original permit application (1998) and has not been identified in the discharge effluent throughout the duration of the permit since 1998 (reference annual report 2002 graphs). Given the culmination of data collected since 1998 indicating the absence of 1,1,1-TCA in discharged water, this 'new information' justifies exception to anti-backsliding provisions (CWA Section 402(o)(2)), and consequently the omission of this effluent limitation from the proposed renewal.

Trichlorofluoromethane
This constituent remains regulated, but is consolidated under the effluent limitation for "Total trihalomethanes", which is assigned a *Municipal/Domestic Supply* water quality standard under NAC445A.144 of 100 μg/L. Compliance criteria under the 1998 version of the permit was 'monitor and report,' and appears to have been satisfied with analyses for only chloroform. The proposed renewal institutes the effluent limitation for "total trihalomethanes," in accordance with NAC 445A.144, representing the cumulative concentration of trihalomethane compounds, including chloroform and trichlorofluoromethane (EPA M524.2 or equivalent).

Rationale for Effluent Limitations:

Flow
Discharge flow is limited to the design discharge of the groundwater treatment system, which is 1.6 mgd on a 30-day average and 2.0 mgd as a daily maximum. Discharge flow from TMWRF is required to determine the applicable cumulative waste load allocation for TDS.

pH
This effluent limitation is required to confirm compliance with the pH water quality standard and for use in determining compliance with the effluent limitation for total ammonia.

Total Phosphorus as P
The IWLA is 4.75 pounds per day [lbs/day]) 30-day average and daily maximum; alternate compliance equations may apply. Total phosphorus has an assigned IWLA and/or ∑WLA to ensure maintenance of the Total Maximum Daily Load (TMDL) assigned for the Truckee River. Compliance with the preeminent mass loading criteria satisfies compliance with the related water quality standard for Total Phosphates listed under NAC 445A.187.

Total Nitrogen as N
The IWLA is 16.7 lbs/day 30-day average and daily maximum; alternate compliance equations may apply. Total nitrogen has an assigned IWLA and/or ∑WLA to ensure maintenance of the Total Maximum Daily Load (TMDL) assigned for the Truckee River. The discharge limitation for kjeldahl nitrogen is considered regulated under the preeminent Total Nitrogen waste load allocation.

Total Dissolved Solids (TDS)
The IWLA is 9,730 lbs/day 30-day average and daily maximum; alternate compliance equations may apply. TDS has an assigned IWLA and/or ∑WLA to ensure maintenance of the Total Maximum Daily Load (TMDL) assigned for the Truckee River. Compliance with the preeminent mass loading criteria satisfies compliance with the TDS water quality standard listed under NAC 445A.187.

Nitrate as N
This monitoring parameter is preserved in the proposed renewal and is limited in accordance with the beneficial use standard listed under NAC 445A.187. The average daily discharge, based on daily maximum limitations, is calculated to be 33 lbs/day.

Total Ammonia as N
Mass loading is limited by the Total Ammonia as N water quality standard equations found in NAC 445A.118.

Using the range of minimum and maximum allowable pH (6.5-8.5) and an estimated temperature range from 14 to 20 degrees Celsius (°C), the 30-day average effluent limitation is estimated to be between 0.765 and 6.67 mg/L (13 to 111 lbs/day) and the daily maximum effluent limitation is estimated to be between 2.14 and 32.6 mg/L (36 t9o 540 lbs/day). Truckee River water quality standards were revised in February 2003 to include a water quality standard for Total Ammonia, without regard to the speciated un-ionized ammonia fraction. The proposed permit renewal consolidates ammonia and un-ionized ammonia monitoring requirements and/or effluent limitations into the single Total Ammonia water quality standard listed under NAC 445A.118 and referenced under NAC 445A.187.

Temperature
The fact sheet for the issuance of the 1998 permit included monitoring for temperature for informational purposes only. This reporting requirement was maintained to accommodate the use and application of the Total Ammonia standard and because initial discharge to the People's Ditch flows approximately one-mile to the confluence with the Truckee River. The time and distance for discharge flow within the People's Ditch inevitably skews the relevance of discharge temperature, particularly since the discharge is simply treated groundwater, which inherently exhibits moderate temperatures. Therefore, the effects of ambient equilibration on the discharge are regarded as similar to those experienced in the Truckee River, and consequently, discharge temperature does not present a reasonable potential to cause or contribute to a violation of water quality standards.

Dissolved Oxygen
The dissolved oxygen effluent limitation is in accordance with the beneficial uses water quality standard listed under NAC 445A.187. The average daily discharge, based on the daily maximum limitations, must be at least 100#/day for November through March and 83 lbs/day for April through October.

Hardness
This monitoring parameter is preserved for use in the determination of aquatic life standards as applicable to specified monitoring parameters required under NAC 445A.144.

Dissolved Lead
Speculation is that this monitoring parameter was included in the 1998 Permit because of the supposed possibility that leaded fuels (tetraethyl lead) may have been one of the types of fuels that impacted groundwater in the vicinity of the remediation project. Other than a few inconsistent analytical data points, dissolved lead has not generally been identified above method detection limits in treated effluent.

Lead was not a constituent identified as 'believed present' in the initial permit application in 1998, nor is it likely to be observed due to the composition of fuel hydrocarbons that are the current subject of the remediation. However, continued analysis for this constituent is required to demonstrate that the aquatic life standard for dissolved lead is met based on a function of the hardness concentration in the effluent discharge. Based on the daily maximum limitations (185 μg/L using a conservative value of reported hardness of 328 mg/L), the average daily discharge is calculated to be 3.1 lbs/day. If subsequent analyses demonstrate that the aquatic life standard is not exceeded, the frequency of monitoring may be reduced under the auspices of a minor modification or the effluent limitation removed entirely based on 'new information' that would or could justify an exception to antibacksliding.

Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX), and Total Petroleum Hydrocarbons
Effluent limitations for these constituents have been preserved because it has been demonstrated that these discharge parameters are technologically achievable and because the project is a remediation of petroleum compounds, which includes these sentinel/indicator compounds. Effluent limitations are required to ensure proper treatment prior to discharge. The average daily discharge rates for these compounds, based on daily maximum limitations, are calculated to be: Benzene (0.08 lbs/day), Toluene (1.7 lbs/day), Ethylbenzene (1.7 lbs/day), Total Xylenes (3.3 lbs/day), and Total Petroleum Hydrocarbons (17 lbs/day).

Methyl tertiary butyl ether (MTBE)
Neither NAC 445A.187 nor NAC 445A.144 listing Truckee River water quality standards and standards for toxic materials, respectively, include a standard for MTBE. Current guidance documentation suggests action levels at 20 or 200 μg/L, depending on exposure and potential receptors, but these concentrations are not codified standards. EPA Taste and Odor thresholds cite a quantitative range of 20 to 40 μg/L, and numerous studies conducted since approximately 1990 indicate that the 40 μg/L limitation represents a relatively conservative value

with respect to both human and ecological toxicity. Documentation on file also indicates that this value is comparable to the regulations and guidelines adopted for MTBE in other western states.

The effluent limitation for MTBE established in the 1998 Permit was based on guidance from the EPA Region IX. The effluent limitation of 40 μg/L, agreed to at that time, falls within the range of concentration that EPA considers will "protect consumer acceptance of the water resource" and "provide a large margin of exposure (safety) from toxic effects." In conjunction with this empirical limitation, Whole Effluent Toxicity (WET) testing was required to confirm the absence of quantifiable toxicity characteristics in the discharge. Results of WET tests compiled throughout the five (5)-year permit term clearly indicates that cumulative discharge effects, including MTBE, are not toxic to indicator aquatic species. Given the cumulative data on file, it can be concluded that the 40 μg/L MTBE effluent limitation has been and remains an effective limitation for the protection of existing water quality and beneficial uses for the Truckee River. The average daily discharge rate for this compound, based daily maximum limitations, is calculated to be 0.67 lbs/day.

1,2-Dichloroethane (1,2-DCA), Dichloromethane (methylene chloride), Tetrachloroethylene (PCE), Trichloroethylene (TCE), Trihalomethanes, and Chloroethylene (vinyl chloride)
Effluent limitations for these constituents remain preserved in the proposed permit renewal and are based on Municipal or Domestic Supply standards listed in NAC 445A.144. The average daily discharge rates for these compounds, based on daily maximum limitations, are calculated to be: 1,2-DCA (0.08 lbs/day), methylene chloride (monitor & report), PCE (0.08 lbs/day), TCE (0.08 lbs/day), total trihalomethanes (1.7 lbs/day), and chloroethylene (0.03 lbs/day).

Whole Effluent Toxicity Testing
The requirement to routinely conduct WET testing has been preserved under the authority of NAC 445A.121(5).

Volatile Organics
This monitoring requirement is included to ensure that the installation and use of new wells does not result in the inadvertent discharge of unidentified, but commonly encountered, fuel-related pollutants that could pose an environmental threat to the Truckee River. Profiling the discharge for Volatile Organics only when new sources of pumped groundwater are introduced will substantiate the absence of unexpected pollutants, while minimizing the routine analytical burden.

SUPPLEMENTAL PERMIT CONDITIONS:

- The Permittee shall notify the Administrator of the Division and the Pyramid Lake Paiute Tribe within twenty-four hours of any upset, bypass, or any other discharge not expressly authorized under the terms of this permit.

SCHEDULE OF COMPLIANCE:
The Permittee shall implement and comply with the provisions of the permit upon issuance, and the following schedule of compliance, after approval by the Administrator, including in said implementation and compliance, any additions or modifications the Administrator may make in approving the schedule of compliance.

- **Upon issuance of the permit,** the Permittee shall achieve compliance with all discharge limitations.

PROPOSED DETERMINATION:
The Division has made the tentative determination to issue (renew) the proposed permit, under the provisions prescribed, for a 5-year period. Under NAC 445A.232, this permit falls under the category of *Discharge from Remediation, Dewatering, other than a discharge to ground water from the dewatering of a mine, or from a Power Plant, a Manufacturing or Food Processing Facility or Any Other Commercial or Industrial Facility 2,000,000 gallons or more but less than 5,000,000 gallons of process water daily.*

PROCEDURES FOR PUBLIC COMMENT:
Notice of the Division's intent to issue a permit authorizing the facility to discharge to waters of the State of Nevada, subject to the conditions contained within the permit, is being sent to the **Reno Gazette Journal** for publication. Notice is also mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the public notice, and must be

postmarked, faxed, or e-mailed by 5:00 p.m. on **TBA XX XX, 2003**. The comment period can be extended at the discretion of the Administrator. A public hearing on the proposed determination can be requested by the Applicant, any affected state, any affected interstate agency, the Regional Administrator, or any interested agency, person, or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reason(s) why a hearing is warranted.

Any public hearing held by the Administrator will be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings will be conducted in accordance with NAC 445A.238. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Tamara J. Pelham
October 1, 2003
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